



Séminaire

le jeudi 17 novembre 2011 à 10h30

CEA-Saclay SPhN, Orme des Merisiers Bât. 703 Salle 125

PROBING PAIRING CORRELATIONS: TWO-NEUTRON TRANSFER REACTIONS IN TIN ISOTOPES

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Correlations induced by residual (pairing) interactions between neutrons in nuclei can be probed with two-neutron transfer reactions. A reaction formalism based on second order DWBA using fully microscopic, non local, transition densities has been successfully used to reproduce both angular distributions and absolute values of cross sections observed in a wide range of two-neutron transfer reactions, confirming the predicted role of pairing correlations in terms of the enhancement of the two-neutron transfer cross section with respect to uncorrelated pair transfer.

This scheme has been recently applied to a systematic study of (p,t) reactions along the tin isotopic chain (from ^{100}Sn to ^{132}Sn). In this region, a transition between a pairing-vibrational (closed shell) and pairing rotational (superfluid) regime is expected; the (p,t) reactions would represent the best probe for such a transition..